

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

1. (Currently Amended) A method of coating a hydrophilic polymer on a surface of a medical device, wherein;

(a) the medical device has a catechol moiety disposed on the surface of said device;
and

(b) the hydrophilic polymer comprises a guanidino moiety, wherein;
the method comprises coating the medical device having the catechol moiety disposed on the surface thereof with the hydrophilic polymer to form a chemical bond between the guanidino moiety of the hydrophilic polymer and the catechol moiety of the medical device surface.

2. (Original) The method of claim 1 wherein the device is selected from the group consisting of a blood-contacting medical device, a tissue-contacting medical device, a bodily fluid-contacting medical device, an implantable medical device, an extracorporeal medical device, a blood oxygenator, a blood pump, a blood sensor, tubing for carrying blood, an endoprosthesis medical device, a vascular graft, a stent, a pacemaker lead, a heart valve, temporary intravascular medical device, a catheter and a guide wire.

3. (Original) The method of claim 1 wherein at least a portion of the surface forms at least one of a tube, a rod, a membrane, a balloon, a bag and a sheet.

4. (Original) The method of claim 1 wherein the surface comprises at least one of a biocompatible material selected from the group consisting of a metal, a titanium, a titanium alloy, a tin-nickel alloy, a shape memory alloy, an aluminum oxide, a platinum, a platinum alloy, a stainless steel, a MP35N stainless steel, an elgiloy, a stellite, a pyrolytic carbon, a silver carbon, a

glassy carbon, a polymer, a polyamide, a polycarbonate, a polyether, a polyester, a polyolefin, a polyethylene, a polypropylene, a polystyrene, a polyurethane, a polyvinylchloride, a polyvinylpyrrolidone, a silicone elastomer, a fluoropolymer, a polyacrylate, a polyisoprene, a polytetrafluoroethylene, a rubber, a ceramic, a hydroxapatite, a human protein, a human tissue, an animal protein, an animal tissue, a bone, a skin, a tooth, a collagen, a laminin, a elastin, a fibrin, a wood, a cellulose, a compressed carbon and a glass.

5. (Currently Amended) The method of claim 1 wherein the hydrophilic polymer is selected from the group consisting of a water-soluble polymer, a water-swellaable polymer, ~~a polymer comprising a hydrophilic chemical moiety~~, a polymer used to reduce friction on a surface, an acrylamide polymer, a methacrylamide polymer, a 2-acrylamido-2-methylpropane sulfonic acid polymer, an acrylic acid polymer, a N-(3-aminopropyl) methacrylamide hydrochloride polymer, a polyvinylpyrrolidone, a polyethylene oxide polymer, a saccharide, a glycan, a hyaluronic acid polymer, a chondroitin sulfate polymer, a poly(alkylene oxalate) polymer, poly(vinyl alcohol) polymer, an ionene polymer, a caprolactone copolymer, a chitin polymer, an agarose polymer, a cellulosic polymer, a poly(maleic anhydride) polymer and a polysaccharide.

6. (Original) The method of claim 1 wherein the hydrophilic polymer is a naturally occurring hydrophilic polymer.

7. (Original) The method of claim 1 wherein the hydrophilic polymer is a chemically synthesized hydrophilic polymer.

8. (Original) The method of claim 1 wherein the hydrophilic polymer has a molecular weight between about 100,000 and about 2,000,000.

9. (Original) The method of claim 1 wherein the surface comprises a primer.

Amendment and Response

Page 4 of 11

Serial No.: 10/054,447

Confirmation No.: 5485

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For: METHOD FOR COATING MEDICAL DEVICE SURFACES

10. (Original) The method of claim 9 wherein the primer comprises the catechol moiety.

11-51. (Canceled)

52-61. (Canceled)

62-102. (Canceled)

103-114. (Canceled)

115-161. (Canceled)

162-173. (Canceled)

174 - 232. (Canceled)

233. (Previously presented) A coated medical device comprising a catechol moiety disposed on the surface of the medical device and a hydrophilic polymer comprising a guanidino moiety, wherein the guanidino moiety is chemically bonded to the catechol moiety.

234-243. (Canceled)

244-245. (Canceled)

246-249. (Canceled)

Amendment and Response

Page 5 of 11

Serial No.: 10/054,447

Confirmation No.: 5485

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For: METHOD FOR COATING MEDICAL DEVICE SURFACES

250-254. (Canceled)

255-261. (Canceled)

262-263. (Canceled)

264-267. (Canceled)

268-272. (Canceled)

273. (Previously presented) The medical device of claim 233 wherein the medical device is selected from the group consisting of a blood-contacting medical device, a tissue-contacting medical device, a bodily fluid-contacting medical device, an implantable medical device, an extracorporeal medical device, a blood oxygenator, a blood pump, a blood sensor, tubing for carrying blood, an endoprosthesis medical device, a vascular graft, a stent, a pacemaker lead, a heart valve, temporary intravascular medical device, a catheter and a guide wire.

274. (Previously presented) The medical device of claim 233 wherein at least a portion of the surface forms at least one of a tube, a rod, a membrane, a balloon, a bag and a sheet.

275. (Previously presented) The medical device of claim 233 wherein the surface comprises at least one of a biocompatible material selected from the group consisting of a metal, a titanium, a titanium alloy, a tin-nickel alloy, a shape memory alloy, an aluminum oxide, a platinum, a platinum alloy, a stainless steel, a MP35N stainless steel, a elgiloy, a stellite, a pyrolytic carbon, a silver carbon, a glassy carbon, a polymer, a polyamide, a polycarbonate, a polyether, a polyester, a polyolefin, a polyethylene, a polypropylene, a polystyrene, a polyurethane, a polyvinylchloride, a polyvinylpyrrolidone, a silicone elastomer, a fluoropolymer, a polyacrylate, a polyisoprene, a

polytetrafluoroethylene, a rubber, a ceramic, a hydroxapatite, a human protein, a human tissue, an animal protein, an animal tissue, a bone, a skin, a tooth, a collagen, a laminin, a elastin, a fibrin, a wood, a cellulose, a compressed carbon and a glass.

276. (Currently Amended) The medical device of claim 233 wherein the hydrophilic polymer is selected from the group consisting of a water-soluble polymer, a water-swellaable polymer, a polymer comprising a hydrophilic chemical moiety, a polymer used to reduce friction on a surface, an acrylamide polymer, a methacrylamide polymer, a 2-acrylamido-2-methylpropane sulfonic acid polymer, an acrylic acid polymer, a N-(3-aminopropyl) methacrylamide hydrochloride polymer, a polyvinylpyrrolidone, a polyethylene oxide polymer, a saccharide, a glycan, a hyaluronic acid polymer, a chondroitin sulfate polymer, a poly(alkylene oxalate) polymer, poly(vinyl alcohol) polymer, an ionene polymer, a caprolactone copolymer, a chitin polymer, an agarose polymer, a cellulosic polymer, a poly(maleic anhydride) polymer and a polysaccharide.

277. (Previously presented) The medical device of claim 233 wherein the hydrophilic polymer is a naturally occurring hydrophilic polymer.

278. (Previously presented) The medical device of claim 233 wherein the hydrophilic polymer is a chemically synthesized hydrophilic polymer.

279. (Previously presented) The medical device of claim 233 wherein the hydrophilic polymer has a molecular weight between about 100,000 and about 2,000,000.

280. (Previously presented) The medical device of claim 233 wherein the surface comprises a primer.

Amendment and Response

Page 7 of 11

Serial No.: 10/054,447

Confirmation No.: 5485

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For: METHOD FOR COATING MEDICAL DEVICE SURFACES

281. (Previously presented) The medical device of claim 280 wherein the primer comprises the catechol moiety.

282-292. (Canceled)